Complete Summary

GUIDELINE TITLE

Preventing falls in acute care.

BIBLIOGRAPHIC SOURCE(S)

Resnick B. Preventing falls in acute care. In: Mezey M, Fulmer T, Abraham I, Zwicker DA, editor(s). Geriatric nursing protocols for best practice. 2nd ed. New York (NY): Springer Publishing Company, Inc.; 2003. p. 141-64. [25 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Falls and injury from falls

GUIDELINE CATEGORY

Evaluation
Management
Prevention
Risk Assessment

CLINICAL SPECIALTY

Family Practice
Geriatrics
Internal Medicine
Nursing
Physical Medicine and Rehabilitation

INTENDED USERS

Nurses

GUIDELINE OBJECTIVE(S)

To provide nurses in the acute care setting with an easy and effective way to implement a falls prevention program and raise the level of care provided to older patients in the acute care setting

TARGET POPULATION

Hospitalized older adults

INTERVENTIONS AND PRACTICES CONSIDERED

1. Evaluate and identify risk factors for falls
    - Targeted questioning of patient and/or caregivers regarding medical and functional history, and review of system problems (i.e., dizziness)
        - Katz Index of Activities of Daily Living
        - Tinetti Gait and Balance Measure
    - Vital signs, including blood pressure (lying, sitting and standing), blood sugars (if diabetic)
    - Medication review
    - Potential risk for significant injury from falls
2. Develop appropriate plan of care for prevention through the use of:
    - Sticker on chart or door to identify risk
    - Voiding schedule, and laxatives as appropriate
    - Environmental modifications
    - Patient relocation
    - Verbal encouragement to participate in daily activities
    - Referral to geriatric psychiatry, therapies as indicated particularly if change in mental status or function
    - Patient education regarding fall prevention strategies
3. Perform a comprehensive evaluation of falls that occur
4. Revise plan of care as appropriate for fall prevention
    - Monitoring devices as appropriate
    - Hip protectors as needed

MAJOR OUTCOMES CONSIDERED

- Incidence of falls in acute care settings
- Morbidity and mortality associated with falls

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Medline was the electronic database used.

NUMBER OF SOURCE DOCUMENTS

35

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guideline was reviewed by a content expert.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Falls may be reduced by following a simple 4 step approach:

1. evaluating and identifying risk factors for falls in the older patient
2. developing an appropriate plan of care for prevention
3. performing a comprehensive evaluation of falls that occur in the hospital
4. performing a post-fall revision of plan of care as appropriate

Assessment

Step 1: Identifying Risk Factors for Falling

There are many known risk factors associated with falls in the older adult (see Table 1). These risks can range from a prior history of a fall to a current acute medical problem, medications given, or use of restraints. Each of these risk factors must be carefully considered and entered into the risk assessment tool (see Table 2 in the original guideline document) to help determine the degree of risk the individual has related to falling.

Table 1: Assessment of Risk Factors Associated with Falls

History of falls

Fear of falling

Bowel and bladder incontinence

Cognitive impairment

Mood

Dizziness

Functional impairment

Medications

Medical problems

Environmental risks

Risk factors for significant injury from falls should be considered during the risk assessment. These risk factors include current use of anticoagulants such as coumadin, Plavix and/or aspirin. Use of these agents puts the older adult at increased risk of bleeding following a fall. Patients who have a history of osteoporosis, in particular, are at increased risk of fracture following a fall, with the most common sites being the hip, wrist and spine. Older adults who have

muscle and fat malnutrition are likewise at increased risk of trauma post fall due to the lack of tissue to help absorb the impact of the falls. Hip protectors, such as Safehip™, should be recommended to individuals who are significantly at risk not only for a fall but also for a possible injury post fall.

Intervention/Care Strategies

Step 2: Development of an Individualized Falls Prevention Intervention

Prevention of falls should be considered as part of routine care for all older adults in the acute care setting. Table 5, below, describes ideal routine fall prevention care. The interventions should focus on areas of risk for the individual (see Table 6, below), such as environmental challenges, functional limitations, or drug related problems such as orthostatic hypotension related to a medication or delirium caused by the addition of a sleeping pill.

Table 5: Standard Fall Prevention for All Older Adults

1. Familiarize patient with environment (i.e., identify call light, bathroom and may need to label)
2. Maintain call bell in reach and have patient demonstrate ability to call for the nurse
3. Place bed in low position with brakes locked
4. Ensure footwear are fitted, non-slip and used properly
5. Determine appropriate use of side rails based on cognitive and functional status
6. Utilize night light
7. Keep floor surfaces clean and dry
8. Keep room uncluttered and make sure that furniture is in optimal condition
9. Make sure patient knows where personal possessions are and that he/she can safely access them
10. Ensure adequate handrails in bathroom, room and hallway
11. Establish a plan of care to maintain bowel and bladder function
12. Evaluate effects of medications that increase the individual´s risk of falling
13. Encourage participation in functional activities and exercise at patient´s highest possible level and refer to physical therapy as appropriate
14. Monitor patient regularly
15. Educate patient and family regarding fall prevention strategies

Table 6: Interventions to Decrease Risk for Falls

Risk Factors	Nursing Interventions to Decrease Risk for the Individual
History of falls	Identify the patient as being at risk for falls: may use sticker on chart or door
Fear of falling	Encourage patient to verbalize feelings Strengthen self-efficacy related to transfers and

	ambulation by providing verbal encouragement about capabilities and demonstrating to patient his/her ability to perform safely
Bowel and bladder incontinence	Set up regular voiding schedule (every 2 hours or as appropriate based on patient need) Monitor bowel function and encourage sufficient fluids and fiber (eight 8-ounce glasses daily and 24 grams of fiber) Utilize laxatives as appropriate
Cognitive impairment	Evaluate patient for reversible causes of cognitive impairment/delirium and eliminate causes as relevant Monitor resident with cognitive impairment at least hourly with relocation of the patient such that nursing staff can observe/monitor regularly Encourage family member to hire staff or stay with patient continuously Utilize monitoring devices if accessible (i.e., bed/chair or exit alarms)
Mood	Encourage verbalization of feelings Evaluate patients ability to concentrate and learn new information Encourage engagement in daily activities. Refer to geriatric psychiatry as appropriate
Dizziness	Monitor lying, sitting and standing blood pressures and continually evaluate for factors contributing to dizziness Encourage adequate fluid intake (eight 8-ounce glasses daily) Set up environment to avoid movements that result in dizziness/vertigo If diabetic, monitor blood sugars and facilitate interventions to maintain appropriate blood sugars

Functional impairment	Encourage participation in personal care activities at highest level (i.e., if possible encourage ambulation to bathroom rather than use of bedpan) Refer to physical and occupational therapy as appropriate Facilitate adherence to exercise program when indicated
Medications	Review medications with primary health care provider in the acute care setting and determine need of each medication Ascertain that medications are being used at lowest possible dosages to obtain desired results
Medical problems	Working with primary health care provider in acute care settings augment management of primary medical problem such as Parkinson´s Disease or congestive heart failure or anemia Assure patient that medical problems are not a reason to remain in bed and prevent participation in functional activities
Environmental risks	Remove furniture if patient can´t sit on it and have his or her feet reach the floor Remove clutter Make sure furniture and any assistive devices used are in good condition Make sure lighting is adequate Make sure safety bars are available in bathrooms

Evaluation

Step 3: Comprehensive Evaluation of Falls

Once a patient in the acute care setting has fallen, a comprehensive evaluation should be done to establish harm and the cause of the fall. Table 3 in the original guideline document provides a guideline for what to evaluate at the time of fall, and Table 7, also in the original guideline document, provides a guideline for a more comprehensive assessment of the patient at the time of the fall to help identify cause. Table 8 in the original guideline document provides a guide for evaluating the patient and determining the contributing factors to the fall. This

guide helps to identify not only the consequences of the fall but also the potential contributing factors. While management of the acute problem post fall is essential, it is also important to make sure that the initial evaluation of the fall risk and implementation of the plan of care to prevent falls is revised based on the findings from the fall.

Step 4: Revision of the Initial Plan of Care for Falls Prevention

Based on the information gleaned from the fall, revisions in the care plan should be made. Older patients are at increased risk for a subsequent fall just based on the fact that they have sustained a fall. Aggressive interventions should be implemented to decrease future falls (see Table 6 above).

The prevention of falls on an acute care unit should include all members of the health care team as well as the patient and his or her family. Patients and their families and/or caregivers are the core of the team, therefore they should be provided with information on fall-prevention strategies on the unit and what is being done to prevent falls. A simple handout, for example, can explain why a wrist band is a certain color or why the bedrails just go half way down the bed. The philosophy of care on the unit should also be given to patients, families, and caregivers. Ideally this philosophy should focus on encouraging patients to participate in functional activities at their highest possible level (see Table 9 in the original guideline document). This might mean that the individual is encouraged to walk to the bathroom as soon as possible after being stabilized from the acute event.

Electronic warning devices such as bed and chair alarms are suggested as an intervention to prevent falls. Alarm systems are designed to alert nursing staff that a patient is getting up from the bed or a chair and for this reason is potentially at risk for falls. Indications for alarm systems include those patients with a history of falls, unsafe bed mobility, cognitive deficits, confusion, those who are alone in the room and/or those who are unable to use the call bell. The efficacy of an alarm system depends on effective technology and the response time of nursing staff. Examples of particular devices and how to obtain them are provided in Tables 10 and 11 in the original guideline document.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Prevention of falls and fall-related injuries
- Provision of nursing care that focuses on improving and maintaining the functional ability of older patients. The step approach presented in this guideline provides nurses in the acute care setting with an easy and effective way to implement a falls prevention program and raise the level of care provided to older patients in the acute care setting.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

It is important to monitor the outcomes of the fall prevention program and determine how effective the program actually is in terms of fall and injury reduction. An established policy should assign accountability and responsibility for the ongoing monitoring and re-evaluation of fall prevention assessments and interventions, keeping in mind that the fall prevention program should include a multidisciplinary approach. The policy should include:

1. assessment criteria and frequency
2. documentation requirements for assessment and interventions
3. methods to communicate changes in the intervention and plan of care

In particular, key elements that are useful to track include fall rate and injury index. Reporting fall rates, rather than number of falls, is a more accurate measure of improvement. Fall rates are calculated by dividing the number of falls by patient days and then multiplying by 1000. These rates can vary by type of institution, patient acuity and clinical service.

Classifications of severity of injury are also important quality indicators. The injury index is calculated by number of injuries divided by number of falls multiplied by 100. Injuries can be categorized into 5 classes:

1. no injury
2. minor injury
3. moderate injury
4. major injury
5. death

Injury rates (Class II-V) in acute care have been reported to range from 20 to 30%. Serious injuries (Class IV to V) have been reported to range from 2 to 6%.

It is useful to report, by unit and overall hospital, the fall rate and injury index. In many cases, the fall rate will increase with the implementation of a fall prevention program due to heightened awareness of falls and increased reporting of fall events. With this phenomenon, however, there may be a decrease in the injury index due to the increased reporting of minor falls that did not result in injury.

The location, time and circumstances of a fall, as well as patient risk factors should also be tracked. This information can help in identifying high-volume or peak time periods or areas where falls occur. These peaks can be reviewed to suggest adjustments in scheduling or routines to help staff further decrease the incidence of falls. Trends across units can then be addressed to augment the individualized approach taken for each patient. Documentation of the use of restraints and/or bed or chair alarms is also important in order to evaluate the effectiveness of the equipment and the appropriateness of the initial application.

Implementing a fall prevention program in the acute care setting is both challenging and rewarding. To best assure that such a program will be fully implemented and carried out a "champion" is needed to lead the endeavor and to help all staff engage in the appropriate fall prevention activities. In addition, it may be necessary to provide ongoing education about falls prevention and the fall prevention program implemented to staff, patients and families at intervals, and to provide positive reinforcement to staff for any steps made toward implementation.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Resnick B. Preventing falls in acute care. In: Mezey M, Fulmer T, Abraham I, Zwicker DA, editor(s). Geriatric nursing protocols for best practice. 2nd ed. New York (NY): Springer Publishing Company, Inc.; 2003. p. 141-64. [25 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003

GUIDELINE DEVELOPER(S)

The John A. Hartford Foundation Institute for Geriatric Nursing - Academic Institution

GUIDELINE DEVELOPER COMMENT

The guidelines were developed by a group of nursing experts from across the country as part of the Nurses Improving Care for Health System Elders (NICHE) project, under sponsorship of The John A. Hartford Foundation Institute for Geriatric Nursing.

SOURCE(S) OF FUNDING

Supported by a grant from the John A. Hartford Foundation.

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Primary Author: Barbara Resnick, PhD, CRNP, FAAN, FAANP

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Copies of the book Geriatric Nursing Protocols for Best Practice, 2nd edition: Available from Springer Publishing Company, 536 Broadway, New York, NY 10012; Phone: (212) 431-4370; Fax: (212) 941-7842; Web: www.springerpub.com.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on July 30, 2003.The information was verified by the guideline developer on August 25, 2003.

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